telephony

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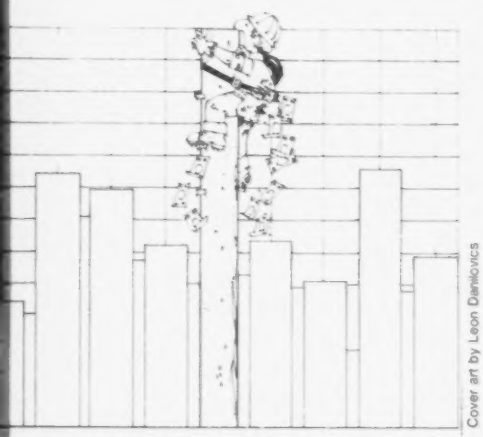
Execs look at the future

'82 telco construction spending increases $1.5 billion—up to record $24.6 billion

LEO ANDERSON, Publisher, and **GERRY BARRETT,** Special Projects Director

U.S. TELEPHONE COMPANIES will spend an estimated $24.6 billion on construction in 1982. This is a new record and nearly $1.5 billion more than 1981. The percentage increase is 6.3%.



Cover art by Leon Danilovics

TELEPHONE COMPANY spending construction will reach an estimated $24.6 billion in 1982, a new industry record.

The Bell System share of that total is $19.18 billion; the Independents', $5.4 billion.

These figures come from American Telephone & Telegraph Co. (AT&T), New York, N.Y., as well as from 23 of the top Independent telephone companies, plus statistical information from the U.S. Independent Telephone Assn. (USITA), whose figures cover 96.6% of the Independent industry. Extrapolation by TELEPHONY results in a reasonably realistic picture of the entire U.S. telephone field.

While AT&T's Bell System obviously still massively dominates the industry, with nearly 80% of the nations's 184.2 million telco-owned phones, the Independents are moving upward at a faster pace by virtually all measurements. The Independent segment's construction spending increase for 1982 over 1981, for example, will be 11.1%, compared to the Bell System increase of 5%. Comparing growth rates of Bell and Independents over the past 5 years, using several yardsticks: in number of telephones, Bell is up 16%, Independents 28%; gross plant investment—Bell up 53%, Independents 70%; annual operating revenues—Bell up 71%, Independents 89%; number of operating company employes—Bell up 13%, Independents 23%. Those employment figures, incidentally, show the Bell System having 875,200 operating company employes (as of Nov. 30, 1981) and Independents having 197,000 employes at year-end, which means that operation of the country's telephone system requires more than 1 million men and women.

The number of telco-owned telephones continues to move upward at a goodly pace despite the fact that a trend begun 4 years ago manifested itself strongly during 1981. That trend: a slowing down of the growth in number of telco-owned telephones. The trend began in '77 in the Bell System and '79

Table 1 Independent and Bell Construction Expenditures

	Independent Telephone Companies (millions of dollars)**			Bell Telephone Companies (millions of dollars)***			Combined Independent & Bell Telephone Companies (millions of dollars)		
	Const. Spending	Increase (Decrease) vs. Previous Year	% Increase (Decrease)	Const. Spending	Increase (Decrease) vs. Previous Year	% Increase (Decrease)	Const. Spending	Increase (Decrease) vs. Previous Year	% Increase (Decrease)
1961	$586	$—	—	$2,759	$—	—	$3,325	$—	—
1964	780	—	—	3,566	—	—	4,346	—	—
1967	1,254	—	—	4,359	—	—	5,613	—	—
1970	1,665	—	—	7,314	—	—	8,979	—	—
1973	2,325	—	—	9,516	—	—	11,841	—	—
1976	2,481	59	2.4	10,044	519	5.5	12,525	578	4.9
1977	2,797	316	12.7	11,793	1,749	17.4	14,590	2,065	16.5
1978	3,471	674	24.1	13,951	2,158	18.3	17,422	2,832	19.4
1979	4,205	734	21.1	16,050	2,099	15	20,255	2,833	16.3
1980	4,544	339	8.1	17,505	1,455	9.1	22,049	1,794	8.9
1981	4,899*	355*	7.8*	18,270*#	765*#	4.4*	23,169*	1,120*	5.1*
1982	5,444*	545*	11.1*	19,180*#	910*#	5.0*	24,624*	1,455*	6.3*

*Estimated
**Source: USITA
***Source: AT&T (Bell Telephone Companies include AT&T, its principal telephone subsidiaries, and Bell affiliates, Southern New England Telephone Co. and Cincinnati Bell, whose common stocks are minority-owned by AT&T.)
#Rounded to nearest 10 million dollars.

Table 2 Independent Telephone Company Statistics

Number of Telephones, United States (000 omitted)

	Year-End Total	Increase
1976	28,209	—
1977	29,675	1,466
1978	31,549	1,874
1979	33,226	1,677
1980	34,665	1,439*
1981	36,084*	1,419*
5-year Growth	7,875=28% of year-end '76	
1982	37,844*	1,760*

Number of Independent Telephone Exchanges

	Year-End Total	Increase
1976	11,040	—
1977	11,045	5
1978	11,053	8
1979	11,050	(3*)
1980	11,040	(10)
1981	11,035*	(5*)
5-year Decrease	−5 of year-end '76	
1982	11,025*	(10)*

Number of Independent Telephone Companies

	Year-End Total	Decrease
1976	1,590	—
1977	1,556	34
1978	1,527	29
1979	1,488	39
1980	1,483	5
1981	1,460*	23*
5-year Decrease	130=8% of year-end '76	
1982	1,435*	25*

Investment in Gross Plant ($000,000 omitted)

	Year-End Total	Increase
1976	$23,000	$—
1977	25,130	2,130
1978	27,788	2,658
1979	31,644	3,856
1980	35,300	3,656
1981	39,181*	3,881*
5-year Growth	$16,181=70% of year-end '76	
1982	43,584*	4,403*

Total Operating Revenues ($000,000 omitted)

	Year-End Total	Increase
1976	$6,300	$—
1977	7,115	815
1978	8,085	970
1979	9,240	1,155
1980	10,475	1,235
1981	11,911*	1,435*
5-year Growth	$5,610=89% of 1976 Revenues	
1982	14,055*	2,144*

Employes

	Year-End Total	Increase
1976	160,000	—
1977	167,000	7,000
1978	179,000	12,000
1979	190,000	11,000
1980	194,000	4,000
1981	197,000*	3,000*
5-year Growth	37,000=23% of year-end '76	
1982	202,000*	5,000*

*Estimated
Source: USITA

among the Independents, as the number of actual phones gained for those years dropped below the gains of the preceding years. Looking back, the Bell System gained 5.78 million phones in 1977 over '76; in '78 the net gain was an even 5 million phones. In '79 and '80 the net gain was down, (see Table 3); too but in the year immediately past, the decline in net gain was precipitous—from 3.56 million in 1980 to 847,000 in '81. Meantime, the Independents gained 1.4 million phones in 1981, which means that for the first time probably since the turn of the century the Independents gained more telephones than Bell. Nevertheless, their net gains have been dropping, too (see Table 2).

This trend is by no means a measure of the relative strength of the industry segments involved, but rather a reflection of increasing customer ownership of telephones fostered by Federal Communications Commission and court actions. The end result is that number of telephones becomes a less meaningful measure than in the past.

Statistics on customer ownership of phones are difficult to come by and those available are far from precise. The Bell System estimates there are 7 million customer-owned residence telephone sets in its operating territories. The spokesman who provided that figure emphasized that a good deal of guesswork went into it and said he could not give a figure for number of business phones that are owned by subscribers.

Other major yardsticks covered in the survey showed that Bell System investment in total telephone plant increased by an estimated $9.8 billion in the 12 months ended Nov. 30, 1981, for an estimated total at that date of $146 billion. Bell estimated operating revenues for '81 were $57.3 billion, up $6.5 billion. Bell gained seven exchanges during the year, the first increase in 5 years. Total number of Bell exchanges was estimated at 6694 at year-end.

Comparable figures on the Independent side show estimated gross plant investment of $39.1 billion at year-end—a gain of $3.88 billion; operating revenues up an estimated $1.4 billion to $11.9 billion (est.); number of exchanges down 5 to a total of 11,035 (est.).

The 23 top Independents taking part in this survey comprise about 96% of the gross plant investment of the Independent segment of the industry, and therefore an examination of which way these leaders are going in terms of their spending for 1982 would be of interest. Statistical details can be examined in Table 6, but here are the highlights of the survey's findings:

1. Fourteen of the 23 companies spent more on construction in 1981 than in 1980. Six companies spent less, and three spent the same amount for both years.

2. Four of the top five companies report increases in construction spending for 1981: 11.6% for Mid-Continent, 4.2% for GTE, 3.6% for Central Tel and 3.3% for United. Continental will spend 4.4% less.

3. Considering the six which reported '81 spending below '80, the decreases range from 18.8% to less than 1%.

4. Of those 14 reporting increased spending, the increases range from 62.7% for Anchorage Tel to 3.3% for United.

5. For 1982, 16 companies reported higher construction budgets than '81; 6 reported lower budgets and one will remain the same. Increases range from 37.2% to 1.6%, while decreases are from 34.6% to 1.8%.

6. Four of the top five companies are estimating increases in construction spending for 1982—United up 12.6%, Continental up 10.2%, Central up 1.6%, and Mid-Continent up a whopping 25.9%. GTE projects the same amount of construction spending in 1982 as in 1981.

7. For 1983, the 23 companies are almost evenly divided—12 will increase spending over 1982, and 13 will not spend as much as in 1982. Increases range from 52% to 1.8% and decreases are from 44% to 4%. All top five companies project increases: 8% for GTE, 4.4% for United, 5.8% for Continental, 13.4% for Central and 5.9% for Mid-Continent.

Once again the number of Independent telephone companies declined—from 1483 at the end of '80 to 1460 as of Dec. 31, 1981. (Figures for both years are estimated.) This decline is part of a longstanding trend, and it likely will continue, although at an ever slower pace, as the size of the field in number of entities constricts.

Even more important changes are taking place within the various major companies in the field; although they have not yet jelled enough to quantify. Bell, for example, has plans for substantial

'It is pretty clear by now that debate on the issues in the business in every public forum presages some form of deregulation. The key question that must be answered is what form deregulation will take.'

consolidation of functions among operating companies even though the territorial divisions and corporate entities remain. General Telephone & Electronics, the largest of the Independents, has moved even further, to the point of consolidating corporate offices and officers for a number of its operating companies.

These actions, and other sweeping actions by other companies, are products of the rapidly changing structure of the industry. A major catalyst to this change is the increasingly unregulated aspect of the industry, with deregulation happening piecemeal even as most of the field awaits the true and final definition of just what form deregulation will take.

A major part of TELEPHONY's survey was a request that telcos answer the question: "What have been the major effects of deregulation on your company's planning?" Answers came from 13 companies representing the giants—AT&T, GTE, United—as well as some of the smaller of the leading Independents—Denver and Ephrata Tel, and North Pittsburgh Tel. The answers are interesting because of the variety of companies responding, but more especially for the different tacks taken by the respondents. Some emphasized the mysteries of deregulation; others, the risks; still others, the opportunities; and many, a combination of all three.

It cannot be said that any one statement is typical of the whole, but we view United Telecom Chairman Paul Henson's as something of a summation, and have, therefore, used it as our Guest Editorial in this issue (p. 23).

The most succinct response came from Royster M. Tucker Jr., president of North State Telephone Co., High Point, N.C., who said deregulation has affected three areas of company planning: "We plan to strengthen and streamline sales and marketing methods...We plan to further diversify and broaden offerings of terminal equipment...We foresee expanding the scope of technical training in the business communications area of operations."

Here are the statements from the other companies participating:

Anchorage..."not unsinkable." Your question, "What have been the major effects of deregulation on your company's planning?" is certainly provocative, even if difficult to quantify.

It's provocative in that deregulation touches almost every aspect of a local utility's operation, even though supposedly limited to customer premises equipment (CPE). I think almost everyone in telephony certainly realizes by now that CPE is simply the tip of an iceberg that can inflict severe economic harm upon a utility's customers should proper courses of action and planning not be prudently selected for the coming years.

The effects of deregulation are difficult to quantify due to all the uncertainties that exist today. Current FCC [Federal Communications Commission] dockets and Joint Board procedures along with proposed legislation in both the U.S. Senate and House of Representatives spew forth a multitude of varied concepts on the proposed breadth and extend to which deregulation should take effect. It is virtually impossible to quantify all the varied ramifications that may result from each approach and how they interrelate to each other.

The most effective approach to future planning that we have right now is vigorous participation in these ongoing procedures to the maximum extent possible. It is our primary purpose in these efforts to illustrate the positive and negative effects various proposals have upon a typical Independent telephone utility such as ours and the alternative approaches that exist to offset these effects while still attaining the original goals of deregulation. In this way we hope to shape the future plan rather than simply plan for alternative futures.

It is our firm belief that the Independent telephone utility is *not* unsinkable and that only through active participation with others in plotting new courses will we arrive intact at our destination: universal availability of basic telephone service at reasonable charges. *A.C. Pistorius, General Manager, Anchorage (Alaska) Utility.* □

AT&T..."uncertainty." To date, the major effect of deregulation on AT&T's

Table 3 Bell System Statistics**

Number of Telephones*
(000 omitted)

	Year-End Total	Increase
1976	126,612	—
1977	132,397	5,785
1978	137,478	5,081
1979	142,310	4,832
1980	145,876	3,566
1981	146,723‡	847‡

5-year Growth
20,111 = 16% of year-end '76

Investment in Total Telephone Plant
($000,000 omitted)

	Year-End Total	Increase
1976	$95,798	$—
1977	103,576	7,778
1978	112,989	9,413
1979	123,867	10,878
1980	136,524	12,657
1981	146,310 †	9,786†

5-year Growth
$50,512 = 53% of year-end '76

Bell System Exchanges

	Year-End Total	Increase/ Decrease
1976	6,713	—
1977	6,711	−2
1978	6,705	−6
1979	6,693	−12
1980	6,687	−6†
1981	6,694‡	+7†

Operating Revenues
($000,000 omitted)

	Year-End Total	Increase
1976	$33,493	$—
1977	37,247	3,754
1978	41,945	4,698
1979	45,408	3,463
1980	50,791	5,383
1981	57,298‡	6,507‡

5-year Growth
23,805 = 71% of year-end '76

Operating Company Employes

	Year-End Total	Increase/ Decrease
1976	777,721	—
1977	785,378	+7,657
1978	823,159	+37,781
1979	855,309	+32,150
1980	867,835	+12,526
1981	875,200‡	+7,365‡

5-year Growth
97,497 = 13% of year-end '76

*Bell System includes AT&T, its principal telephone subsidiaries, and Bell affiliates (Southern New England Telephone Co. and Cincinnati Bell) whose common stocks are minority-owned by AT&T.
**Includes Bell Service Telephones
†Estimated
‡As of Nov. 30
Source: AT&T

Table 4 Independent Telephone Company Composite Plant Statistics ($000,000 Omitted)

Buildings

	Year-End Total	Increase
1975	$1,344.8	$—
1976	1,439.4	94.6
1977	1,523.4	84
1978	1,644.3	120.9
1979	1,825.8	181.5
1980	1,976.3	150.5

5-year Growth
$631=46.9% of year-end '75

Underground Cable

	Year-End Total	Increase
1975	$841.1	$—
1976	910.1	69.0
1977	975.5	65.4
1978	1,081.5	106.0
1979	1,245.2	163.7
1980	1,373.9	128.7

5-year Growth
$532.8=63% of year-end '75

Large Private Branch Exchanges

	Year-End Total	Increase
1975	$531.3	$—
1976	598.5	67.2
1977	660.3	61.8
1978	726.2	65.9
1979	853.3	127.1
1980	906.3	533

5-year Growth
$375=70.5% of year-end '75

Aerial Cable

	Year-End Total	Increase
1975	$2,216.8	$—
1976	2,359.5	142.7
1977	2,516.4	156.9
1978	2,697.6	181.2
1979	2,978.9	281.3
1980	3,190.7	211.8

5-year Growth
$973.9=43.9% of year-end '75

Station Apparatus

	Year-End Total	Increase
1975	$1,905	$—
1976	2,058.3	153.3
1977	2,275.4	217.1
1978	2,536.4	261.0
1979	2,918.6	382.2
1980	3,027	108.4

5-year Growth
$1,122=58.8% of year-end '75

Underground Conduit

	Year-End Total	Increase
1975	$518.6	$—
1976	566.5	47.9
1977	606.8	40.3
1978	664.5	57.7
1979	765.8	101.3
1980	863.9	98.1

5-year Growth
$345.3=66.5% of year-end '75

Central Office Equipment

	Year-End Total	Increase
1975	$6,763	$—
1976	7,542.8	779.8
1977	8,169.8	627
1978	8,963.8	794
1979	10,128.4	1,164.6
1980	11,146.2	1,017.8

5-year Growth
$4,383.2=64.8% of year-end '75

Buried Cable (Plowed In)

	Year-End Total	Increase
1975	$2,393.3	$—
1976	2,851.2	457.9
1977	3,219.4	368.2
1978	3,654.5	435.1
1979	4,165.9	511.4
1980	4,740.6	574.7

5-year Growth
$2,347.3=98.1% of year-end '75

Vehicles, Other Work Equipment

	Year-End Total	Increase
1975	$365.1	$—
1976	404.4	39.3
1977	459.9	55.5
1978	550.6	90.7
1979	641	90.4
1980	700.2	59.17

5-year Growth
$335.1=91.7% of year-end '75

Source: USITA (Extrapolated by TELEPHONY to 100% of Independent companies.)

planning has been to raise the level of uncertainty in which we must operate. And while uncertainty is to some degree always part of the planning process, this is especially true in today's transition to a partially deregulated industry.

The factor that really muddies the waters for us is that there are few "givens" on which to base our planning. Chief among the missing elements are the operating ground rules that eventually will emerge from the resolution of legislative action and appeals from the FCC's Second Computer Inquiry orders.

It is pretty clear by now that debate on the issues of the business in every public forum presages some form of deregulation. The key question that must be answered is what form deregulation will take.

In planning, we have tried to anticipate a reasonable outcome, and we have tried not to go out too far on a limb. We have been working on the widely-accepted perception that the Bell System will be permitted a level of participation in unregulated markets; the ticket for entry, of course, is going to be some level of restructuring of our company's business.

What we cannot do, however, is sit back and wait for the decisionmakers to dot every "i" and cross every "t" of the evolving groundrules. We must go about our business in a way that we think will fit the likely requirements of deregulation and rapidly changing technology while meeting the emerging demands of the marketplace. That course can be seen in our recent announcement for the initial capitalization of our new fully separated subsidiary to offer Advanced Communications Service.

L.S. Cutcliff

If there is one remaining certainty in our planning, it is this: we intend to bring into the new environment the service concept that has proven so valuable in the past and the unswerving commitment to meet customer needs one by one. We see no distinction between the regulated and deregulated sectors in that regard, and we will draw no distinctions between service and marketing. It's pretty clear to us that customer needs are becoming increasingly individualized; our primary goal in planning is to meet these expectations.—*Lee Cutcliff, Assistant Vice President-Strategic Planning, American Telephone & Telegraph Co. (AT&T), New York, N.Y.* □

GTE..."opportunity." The introduction of deregulation into the telecommunications industry is creating two important areas of opportunity that are receiving extensive consideration in the future-planning programs at GTE.

These areas are: planning to provide regulated services in the competitive environment; and planning to participate in deregulated or "lightly regulated" businesses.

Historically, telephone companies have focused their planning activities on quality of service, market growth, intro-

Continued on page 32

Table 5 Bell System Composite Plant Statistics ($000,000 omitted) (source AT&T)

Buildings

	Year-End Total	Increase
1975	$8,266	$—
1976	8,950	684
1977	9,553	603
1978	10,080	527
1979	10,680	600
1980	12,117	1,437

5-year Growth
$3,851=47% of year-end '75

Buried Cable (Plowed In)

	Year-End Total	Increase
1975	$6,593	$—
1976	7,357	764
1977	8,283	926
1978	9,421	1,138
1979	10,735	1,314
1980	12,078	1,343

5-year Growth
$5,485=83% of year-end '75

Large Private Branch Exchanges

	Year-End Total	Increase
1975	$3,167	$—
1976	3,230	63
1977	3,256	26
1978	3,300	44
1979	3,385	85
1980	3,495	110

5-year Growth
$328=10% of year-end '75

Central Office Equipment

	Year-End Total	Increase
1975	$33,098	$—
1976	35,351	2,253
1977	37,714	2,363
1978	40,403	2,689
1979	43,140	2,737
1980	46,468	3,328

5-year Growth
$13,370=40% of year-end '75

Underground Cable

	Year-End Total	Increase
1975	$5,864	$—
1976	6,262	398
1977	6,760	498
1978	7,393	633
1979	8,189	796
1980	9,146	957

5-year Growth
$3,552=61% of year-end '75

Vehicles & Other Work Equipment

	Year-End Total	Increase
1975	$1,122	$—
1976	1,225	103
1977	1,365	140
1978	1,548	183
1979	1,852	304
1980	2,101	249

5-year Growth
$979=87% of year-end '75

Aerial Cable

	Year-End Total	Increase
1975	$6,673	$—
1976	7,126	453
1977	7,659	533
1978	8,258	599
1979	8,950	692
1980	9,798	848

5-year Growth
$3,125=47% of year-end '75

Underground Conduit

	Year-End Total	Increase
1975	$3,975	$—
1976	4,266	291
1977	4,646	380
1978	5,189	543
1979	5,873	684
1980	6,617	744

5-year Growth
$2,642=66% of year-end '75

Station Apparatus

	Year-End Total	Increase
1975	$6,636	$—
1976	7,238	602
1977	8,039	801
1978	9,026	987
1979	9,889	863
1980	10,875	986

5-year Growth
$4,239=64% of year-end '75

Total Station Equipment

	Year-End Total	Increase
1975	$16,769	$—
1976	18,117	1,348
1977	19,835	1,718
1978	21,974	2,139
1979	24,372	2,398
1980	27,117	2,745

5-year Growth
$10,348=62% of year-end '75

duction of new services and new technology, capital requirements and control of costs. Without question, these matters will continue to be important concerns after Jan. 1, 1983.

With the advent of deregulation, two new areas of importance to planners have arisen: planning for the GTE telephone companies' involvement in providing deregulated customer premises equipment; and planning for providing network services in the face of expensive and steadily increasing competition.

Plans to provide deregulated CPE must ensure the orderly withdrawal from the provision of such equipment on a regulated basis in a manner which will cause the least possible disruption to customers while recovering the investment GTE has made under regulation. The company intends to be an active participant in the FCC's "CPE implementation proceeding" to establish the orderly withdrawal of telephone companies from the regulated provision of CPE.

Since GTE is a non-dominant carrier, our telephone companies will be allowed to provide new, deregulated CPE on a going-forward basis. Accounting and operational procedures will assure that these deregulated activities are not subsidized by the regulated side of the business.

The provision of network services on a competitive basis is a matter of vital concern to GTE. We firmly believe that economically integrated network services should continue to be made available to all customers at the lowest possible prices. However, we will have difficulty competing with the other common carriers that do not have the same cost allocation burdens that must be borne by telephone companies. We are therefore looking at various ways that will enable us to compete on a sound economic footing in these areas.

Competition and deregulation present several opportunities for GTE to offer both deregulated and lightly regulated products and services. As far as the deregulated offerings are concerned, GTE is, and will continue to be, a principal provider of customer-owned CPE. In the deregulated environment, it will be possible to offer a number of telecommunications products and services on a lightly regulated or perhaps completely unregulated basis.

With the sweeping changes brought about by deregulation and the new competition now evolving, the planning abilities of all of us in GTE are challenged to a very great degree. We are stimulated by these challenges and intend to continue GTE's role as a foremost provider of telecommunications products and services.—*Theodore F. Brophy, Chairman and Chief Executive Officer, General Telephone & Electronics Corp. (GTE), Stamford, Conn.* □

Lincoln Tel & Tel. . . "several external variables." Some of the most dramatic effects of deregulation to date have occurred and continue to occur in our company's planning efforts. Prior to the first hints at deregulation, planning at LT&T primarily consisted of developing operational plans that dealt with the incorporation of new technology, service improvements or the provision of new services.

The process by which these operational plans were developed was typically a series of "studies" evaluating the major technical and financial alternatives. Although occasionally an external variable would slip into these "studies," given the context of monopoly regulation and the traditional role of end-to-end responsibility, the external environment was often not a major consideration.

Deregulation, because it represents a major change in the environment in which we conduct our business, has forced the addition of several external variables to operational planning and has added a new front-end function to

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Table 6 Construction Spending of Major Independents, plus other '81 Year-End Estimated Figures (dollar figures are in millions)

Company	No. of Stations	Plant Investment	Operating Revenues ('81)	Construction Expenditures			
				Spent 1980	Budgeted or estimated		
					1981	1982	1983
General Tel. & Electronics Corp.	16,300,000	$17,800.0	$5,800.0	$2,400.0	$2,500.0	$2,500.0	$2,700.1
United Telecom, Inc.	4,837,000	5,092.0	1,642.0	569.0	588.0	662.0	691.0
Continental Tel. Corp.	2,060,600	3,617.0	1,195.0	408.0	390.2	430.0	455.1
Central Tel. & Utilities Corp.	1,722,116	1,845.0	634.5	192.0	198.9	202.0	229.0
Mid-Continent Tel. Corp.	1,150,000	1,141.0	286.0	96.8	108.0	136.0	144.0
Rochester Tel. Corp.	596,201	560.0	201.2	41.6	49.9	46.2	41.3
Lincoln Tel. & Tel. Co.	338,900	326.2	108.0	31.7	38.4	39.1	42.5
Century Tel. Ent., Inc.	289,000	293.0	112.0	34.5	28.0	31.5	33.6
Telephone & Data Sys., Inc.	249,350	216.0	55.2	19.8	20.7	28.4	25.3
Commonwealth Tel. Co.	240,874	206.8	49.3	18.3	16.3	16.7	15.9
Telephone Utilities, Inc.	208,000	214.0	75.8	36.7	34.0	38.0	36.0
Allied Tel. Co.	208,000	231.0	58.5	22.0	22.0	26.0	30.0
Anchorage Tel. Utility	153,240	192.0	62.9	23.3	37.9	24.8	23.8
Illinois Consolidated Tel. Co.	126,000	109.8	40.8	8.8	14.1	19.9	17.5
North State Tel. Co.	115,015	68.4	22.1	5.7	5.7	5.6	5.7
Citizens Utilities Co.	108,024	208.4	60.0	33.5	33.3	36.5	33.6
The Concord Tel. Co.	97,775	59.2	19.4	4.6	5.9	5.0	5.5
Roseville Tel. Co.	78,700	64.9	22.5	11.2	12.2	12.5	10.4
North-West Tel. Co.	75,500	75.7	22.0	7.0	10.9	11.8	10.9
Universal Tel. Inc.	58,100	60.3	16.2	7.9	9.5	8.7	4.8
Denver & Ephrata Tel. & Tel. Co.	53,900	34.4	9.1	2.4	2.4	3.2	2.6
North Pittsburgh Tel. Co.	54,300	50.9	16.4	5.3	4.7	5.2	5.7
Mankato Citizens Tel. Co.	47,528	39.4	11.7	2.6	3.0	2.5	3.8

Table 7 Construction Expenditures by Bell Telephone Companies* (dollar figures are in millions)

Company	Total Telephones as of Nov. 30, 1981	Plant Invest. ($M) 10 Months Ending Oct. 31, 1981 (1)	Operating Revenues 12 Months Ending Nov. 30, 1981 ($M)	Construction Expenditures ($M)		
				Spent 1980 (2)	Budgeted 1981 (1)	1982 (1)
New England	7,118,000	$6,480	$2,465	$682	$710	$800
New York	11,709,000	13,380	5,435	1,285	1,380	1,510
New Jersey	6,602,000	5,210	1,938	579	650	650
Pennsylvania	8,509,000	6,170	2,156	710	650	670
Chesapeake & Potomac	8,801,000	7,850	2,754	910	930	1,010
Southern	13,037,000	12,830	4,686	1,829	1,750	1,780
South Central	10,684,000	10,570	3,740	1,308	1,310	1,390
Ohio	5,014,000	3,970	1,559	416	440	450
Michigan	6,292,000	5,210	1,834	569	520	500
Indiana	2,638,000	2,150	782	209	200	210
Wisconsin	2,369,000	2,000	721	207	210	210
Illinois	8,496,000	6,370	2,489	684	650	670
Northwestern	5,667,000	5,440	1,863	593	560	590
Southwestern	17,008,000	16,620	6,173	2,207	2,220	2,440
Mountain	8,087,000	8,020	2,881	1,063	1,250	1,440
Pacific Northwest Bell	3,868,000	4,050	1,449	563	530	560
Pacific T&T	16,637,000	17,850	6,151	2,420	2,670	2,630
Long Lines	—	9,020	—	948	1,290	1,430
Bell System	142,536,000	143,190	—	17,182	17,920	18,880
Southern New England	2,617,000	2,200	857,000	221	230	210
Cincinnati	1,209,000	920	325,000	102	120	90
All Cos.	146,362,000	146,310	50,258	17,505	18,270	19,180

(1) Rounded to nearest ten million dollars
(2) Rounded to nearest one million dollars

* "Bell Telephone Companies" includes AT&T, its principal telephone subsidiaries, and Bell affiliates (Southern New England Telephone Co. and Cincinnati Bell) whose common stocks are minority-owned by AT&T.
Source: AT&T

the planning process. This new front-end function, commonly referred to as strategic planning or corporate development, asks the classical question: What businesses are we in? What are our strengths and weaknesses? What businesses do we want to be in? These questions and others like them were academic in the pre-deregulation era, but are now fundamental to the orderly growth of the company. The answers to these questions serve as the basis for operational planning.

In the past a telco manager could describe where the company was headed in terms of its operational plans. Today that manager needs to know the company and its environment well enough to plot a course before those operational plans are developed.—*James E. Geist, Executive Vice President, Lincoln (Neb.) Telephone & Telegraph Co. (LT&T).* □

J.E. Geist

North Pittsburgh Tel ..."diversification." Basically, deregulation has forced our company to plan a course of diversification in order to assure continuing profitability. As deregulation progresses and the cross-subsidies from toll to local service and business to residential service are reduced or eliminated, the stark reality of a marginal basic telephone operation becomes an increasing possibility. The zeal of Congress and the government bureaucracy to reduce the Bell System to impotence, as they reduced the railroads one-half century ago, presents a formidable problem, particularly to non-affiliated telephone companies.

It becomes increasingly obvious that the local telephone company must diversify and seek unregulated activities that can produce returns to compensate for the reduced profitability of the local exchange service that remains. The slogan "SPF [subscriber plant factor] to SLU [subscriber line usage] in '82" signals the necessity to revise local rates to price each service to be fully compensatory, eliminating the station investment, and adds to the problem. State and federal regulatory bodies can be depended upon to fight a delaying action which, if not anticipated, may add to the distress of the smaller companies.

While we are facing definite perils, we are also facing new opportunities. Being able to recognize the good ones, and to make timely moves to exploit them, is our most important current challenge.

Our company was among the first to unbundle its rates and arrange to sell terminal equipment. Serving a bedroom community with no central retail center has proven to be a difficult problem with which to cope. There is no single phone store location to command our customers' attention. This seeming disadvantage has only been partially offset by indirect methods of selling.

More important has been the establishment of an interconnect subsidiary. So far, the subsidiary has been staffed by contracting the services of the telephone company personnel. Added emphasis in the marketing area has developed a very flexible approach to contracting by direct lease, third party leasing, lease-purchase, and outright sale of PABX [private automatic branch exchange] equipment, key systems and a variety of more specialized communication devices. While we have used the telephone company alone within our franchised service area, the subsidiary has been used outside of our area. We have not hidden our telephone company identity, even with the subsidiary, and we have found that with the recent demise of several interconnect companies in our area, the fact that, as a telephone company, we cannot pick up our tent and move overnight, our potential stability is an attractive competitive advantage.

With the advent of the computerized office we are preparing ourselves to offer systems which go beyond the conventional key telephone or PABX. We are convinced that there is a tremendous potential market for that activity, and that our experience and background assist us in effectively moving into that expanding field of endeavor. Total communications is no longer just a buzz word.

There seems to have been a natural involvement in pursuing these new markets for the telephone company and, particularly its subsidiary, to become a distributor of equipment, not only for our internal use, but also to other telephone and non-telephone communication equipment users. The application expertise inherent in the telephone operating business has been a catalyst for the distribution activity.

By far the most serious challenge to us is the potential loss of toll settlement support. Our company is an atypical Independent to the extent that two-thirds of our revenues are derived from toll. Any loss of toll business or reduction in settlement requires a serious shift of support to our local rate structure, which cannot be brought about overnight. Being close to a metropolitan area we decided to file an access tariff in order to provide at least a minimum of threshold of protection. At the same time we are investigating possible interchange of traffic with one or more of the OCCs [other common carriers] as well as the possibility of entering the business as a reseller. Both of these possibilities are fraught with complexities, not the least of which are the encumbrances imposed by the FCC on an Independent telephone company, which they have decreed to be a "dominant carrier" (We are still looking for those we are supposed to dominate.) Being ensnared in the ponderous and slow moving FCC certification and tariff-filing processes, not equally imposed on the competition, places an Independent telephone company and its subsidiary at an inflexible disadvantage.

Having been forced 8 years ago by the FCC to divest ourselves of a profitable CATV [community antenna television] business, we now are overbuilt by four CATV networks. The evolution of technology makes these systems, along with rooftop antennas, increasingly potent competitors to our local distribution system. The emerging cellular radio technology, however, presents yet another distribution means which the telephone industry cannot afford to overlook. So far, the technology is priced beyond the reach of small, less dense systems but, with our Independent neighbors, we are investigating the economic feasibility and potential market of a joint operation which may allow our early entry into this promising new communication medium, which is not limited just to vehicular applications, in our opinion.

We have investigated, or are currently investigating, the provision of other communication services, such as secretarial answering, provision of alarm systems, the operation of alarm and security services, and performing consulting and contracting services. While we are

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trying to move as rapidly as possible into these new areas of endeavor, we are doing so somewhat conservatively so that we are not overextended and can take a high quality, rather than simply a cut rate, approach. In other words, we intend to protect, and at the same time exploit, our reputation as a good, dependable telephone company. In this manner we intend to continue to keep our subsidiary's figures colored black.—*F.D. Reese, President and General Manager, North Pittsburgh Telephone Co., Gibsonia, Pa.* □

F.D. Reese

Continental Tel...''dynamic strategic planning.'' Deregulation certainly has been a most prominent ingredient in our strategic long-range planning process. History may record the deregulation movement as the most significant change in the telecommunications industry since the 1934 Communications Act.

The ball is just off the tee, it's a solid hit, and the direction is clear. How far the deregulation movement will go is steadily coming into sharper focus. Ultimately, there may be no segment of the telecommunications market immune to competition.

Coincident with the beginning of deregulation, the telephone industry was approaching a high level of market saturation. With growth limited, market share fixed by franchised boundaries and the prospect of deregulation, the natural reaction was to take a defensive posture. Our strategic planning process led us to adopt the opposite attitude.

As the last major entrant in the traditional telephone market, we very rapidly captured share enough to become the third largest independent in the country. But, this still represented less than 2% of the market. We viewed deregulation as a means of invading portions of the 98% from which we previously had been excluded.

A major result of the positive planning process was to define our business as a broad based telecommunications business rather than simply a telephone company. This was supported by a carefully planned acquisition and joint venture strategy that could provide the vehicles to transform the company into a sophisticated supplier of data and voice communications services. Already, Continental has made a number of acquisitions and joint venture investments that provide all of the major pieces that the company will need to become a major supplier of such services to the business community.

The positive approach to planning was carried through in regard to the more specific, contemporary issues of deregulation, such as terminal equipment and inside wiring. While the planning process has necessarily become more complex in the short term as a result of the state commissions' various attitudes and rates of evolution to deregulation, the longer term spirit of a competitive environment remains: deregulation suggests customers will have a choice and companies will have a choice as to which segments of the market in which to participate. Working from within its franchised bases, a strategic marketing plan has been developed which includes very aggressive pursuit of selected business terminal equipment markets that offer significant profit potential while adopting a passive approach in less fertile markets. Ultimately, Continental will withdraw entirely from some of these traditional markets.

Similar planning in regard to the residential terminal equipment and inside wiring markets suggests that traditional methods of serving many of these markets will not be profitable on a stand-alone basis. These effects of deregulation have tremendous implications in planning for redeployment of resources.

The opportunities to shed some loss operations puts the company in a better position to be competitive with any potential alternative suppliers of basic access service. The planning process necessarily includes constant monitoring of state-of-the-art technology for any economically viable alternatives for serving the local loop. As a telecommunications company, instead of a telephone company, Continental expects to be positioned to apply any such technologies as rapidly and effectively as anyone.

Deregulation has made a dynamic strategic planning process an essential and fundamental function in the operation of the business.—*James V. Napier, President, Continental Telephone Corp., Atlanta, Ga.* □

J.V. Napier

Centel...''growth and profit.'' Since the mid-'70s, Centel has recognized that many aspects of the telephone industry might be deregulated and has charted its course accordingly. Our more than one-half decade of competitive marketing experience is a major reason why we're achieving our growth and profit objectives, while at the same time minimizing the negative effects deregulation may cause our customers and employes.

Without underestimating the profound changes—which may well be as sociological as financial—deregulation will have on the industry as well as Centel, we've already taken the basic steps that will determine the Centel of the future. We've made bold entries into certain non-regulated businesses, like cable television and business systems marketing, while concurrently modernizing and streamlining our telephone operations to fit the communications needs of contemporary and future society.

Our approach to the acquisition and development of businesses outside the realm of regulated telephone operations began prudently to give our management hands-on experience in a competitive arena with minimal risk to the company. From the modest beginning, however, the company's non-regulated businesses continue to grow, and we expect their contribution to be 25% of earnings by 1985.

For example, next year Centel Business Systems will expand its marketing efforts by opening sales offices in major markets across the country, outside our regulated operations' serving areas. We

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continue to add cable television franchises and expect to have 500,000 cable customers by 1985, up from the 12,000 of a couple of years ago and somewhat more than the 100,000 now.

With revenues of $634.5 million projected for 1981, regulated telephone operations continue to be the heart of our business. Thus, we're accelerating programs with the potential of replacing revenues we predict will be lost through terminal equipment deregulation and changes in toll subsidization in the years to come. Paramount to these are electronic central office conversions which not only make revenue-producing programs like custom-calling readily available but improve productivity as well.

By year-end 1981, 87 of the company's 371 central offices were fully electronic, with 70 being digital. By the end of 1982, one-third of the central offices will be electronic, and nearly 85% of these will be digital.

In the late '70s, Centel pioneered the concept of encouraging customers to become directly involved in the distribution and installation of terminal equipment. Activities like pick-up and return and do-it-yourself inside wiring installation have effectively reduced labor expenses in addition to smoothing the way to direct sale of residential terminal equipment.

Negative customer response to our decisions to reduce the leased product line severely and in some states eliminate extension leasing altogether has been minimal largely because in addition to new equipment, we sell refurbished and in-place telephones at substantially reduced prices. The sale of refurbished equipment also has proved to be an effective excess inventory control device, too.

For the future we don't foresee any magic single program that will recover all lost revenues. Hence, we're testing a variety of new programs, like the sale of toll gift certificates and statement marketing, that can each generate a portion. Others like videotex, resale of WATS [wide area telecommunication service] and cellular mobile telephone service are being analyzed to see what real benefits they might contribute.

We are expanding our local measured service [LMS] program into additional states in 1982. LMS is essential if we are to keep local service rates affordable and compete with other forms of local distribution networks at the same time.

Finally, we're heartened by the apparent mood of Congress to pass definitive communications legislation in the near future. Whether deregulation is phased in or flash-cut, we will continue to vigorously pursue policies which provide equitable capital recovery rates and a realistic transfer price mechanism and amortization of unrecoverable terminal investment.

Deregulation already has opened exciting new opportunities for Centel and its people. We confidently look forward to more.—*B.J. Whicker, General Staff Manager-Public Relations, Central Telephone & Utilities Corp. (Centel), Chicago, Ill.*

Mid-Continent..."transitional." Mid-Continent Telephone Corp. is in the process of developing a transitional program which will be necessary to successfully accommodate the move from a regulated to a deregulated telecommunications industry.

The communications-related businesses that we have moved into as a result of FCC decisions, and those that someday we will move into, have a common thread—a solid opportunity for long-term profitable growth.

In 1977 we entered the interconnect business with Mid-Continent Communications Corp. (MCC), our subsidiary responsible for the sale of business telephone equipment to users who choose to own rather than lease their equipment. MCC has been a highly successful operation which is expected to become more and more active in the telecommunications changes that are occurring and will occur as we embark upon the environment of deregulation.

To enhance the residential market, we have opened and continue to open retail telephone sales outlets, called Conversation Stations, which allow customers to purchase or lease phones of more than 100 different designs and colors.

On the international front, we have organized Mid-Continent Telephone Consulting Services Div. to bolster the company's international efforts. We are currently involved in telecommunications consulting work in Bangkok, Thailand, and Yanbu, Saudi Arabia.

In addition to the communications-related businesses, deregulation is also having a considerable impact on Mid-Continent's rate structure. In earlier times, the telephone industry kept initial charges for phone service low to encourage new installations. But since telephone service is practically universal, and competition has increased, charges will necessarily be adjusted to meet actual costs. Since we will no longer spread installation costs to all customers over a period of years, the first occupant of a new phone or office will bear the greatest burden of cost.

Other rate changes are likely in the area of usage pricing. Telephone service has been based on availability, but metering usage is the pricing approach of the future.

To meet the future challenges of deregulation, Mid-Continent will continue to explore the many opportunities available to us in the vast realm of telecommunications while keeping our two-fold objective unchanged: to provide reliable, innovative telecommunications services at a reasonable price and to reward shareholders with increasing earnings and dividends.—*Weldon W. Case, President, Mid-Continent Telephone Corp., Hudson, Ohio.*

W.W. Case

Allied Tel..."drastic change." Historically, the factors affecting business planning have been primarily related to the economy and technological advances. These are still important contributors to the activities of telephony corporate planners, but for the last several years the greatest single impact has unquestionably come from deregulation.

Every phase of operations planning has been touched by present or potential drastic change. Throughout each company, all levels of management are finding that regular revision of goals and objectives is necessary. More than anything else to date, *uncertainty* has been the product of deregulation in relation to planning. Such uncertainty in turn causes the scope of planning to shorten, and has enlarged the importance of in-house financial and legal expertise. No telco in recent years has had the luxury of conducting true long-range planning with much confidence. In lieu of service-

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at-all costs which the telephone industry has been known for in the past, new approaches must be taken toward expenses and revenues. It appears that different emphasis must be placed on the recovery of expenses for adequate returns on investment.

Revised methods are in order for such things as reaction time to customer desires, services offered on-premise as opposed to the business office, and marketing activities. Personnel must be retrained for skills other than those required in the past, with sales being in the forefront. It is important for each telephone company to maximize the ways to effectively compete with others by taking advantage of strengths and improving weaknesses.

At Allied, we have tried to stay in close touch with governmental actions, industry opinions and customer concerns in order to react appropriately to the issues arising from deregulation. We earnestly want to provide services and products that meet the needs of the times we are operating in, and secure a reasonable return for our investors. The uncertainty of congressional action and FCC and state regulatory body directives, however, has presented us and all other telephone companies with unprecedented challenges.

We will continue to plan and react to the situations facing us to the best of our ability and become a strong competitor in the new marketplace.

From today's uncertainties will come tomorrow's opportunities.—*Joe T. Ford, President and Chief Executive Officer, Allied Telephone Co., Little Rock, Ark.* □

North-West Tel..."diversification." Since deregulation was announced in the telephone industry, our company has developed a program of diversification in various fields of communications. Two years ago, we embarked on the first step of this program by seeking cable television franchises in Wisconsin. A wholly-owned subsidiary, Nor-Com Video, Inc., was formed for this venture. We have been successful in a number of communities. Three systems have been built to date, and another system has been acquired in Minnesota. Franchises are being pursued in a number of other communities in Wisconsin and Minnesota.

In addition to cable television, we are also making plans to expand data processing services which we provide to other Independent telephone companies through our wholly-owned subsidiary, North-West Services Corp. These plans include on-line, interactive data services, provision of terminals and other computer hardware with enhanced software applications. Applications also will be studied for other industries.

While we pursue diversification in other areas of communications, we plan to maintain the growth of our telephone business. We view telephony as a maturing industry with more than 95% of American households receiving telephone service. However, there are opportunities to provide new products and services such as custom calling services and network communications packages which can be provided. The deregulation of terminal equipment also will provide new opportunities. A decision is expected from the Wisconsin Public Service Commission which will authorize direct sale of equipment by telephone companies. Our plans for the sale of telephone equipment are awaiting this decision. Selective acquisition of telephone property also will be considered when they fit into an efficient operating plan. Other services to the Independent telephone industry also are under consideration.

Other opportunities also are being studied in data, voice and video communications. In order to accomplish this broad diversification, a holding company is being formed. There will be opportunities for telephone companies in the 1980s in spite of competition and deregulation. North-West plans to take advantage of these opportunities.—*Harry W. Wellenkotter, President, North-West Telephone Co., Tomah, Wis.* □

H.W. Wellenkotter

Denver and Ephrata..."impossible to formulate operating policies." The deregulation which has been brought about by regulatory changes has made it impossible to formulate operating policies with any degree of faith that they will stay in effect for any period of time.

Currently, our position is to discourage the purchase of terminal equipment by our subscribers and to encourage our customers to lease their equipment from us based upon our established tariff rates. To this end, we feel that we have been relatively successful. The small subscribers save very little when purchasing their own equipment and encounter problems when trying to get the equipment repaired on a timely basis by the vendor or the manufacturer. In addition, they are subject to a service charge if we are called out first, and in most cases we are, and find out that the problem is with their equipment. Our company has had a history of providing prompt repairs and excellent service to our customers, and we plan to continue these procedures. For this reason the major customers in our service area have been inclined to either continue leasing our equipment or have purchased their equipment from us with an associated maintenance contract.

Based on the rules now in effect, we intend to continue these policies until Jan. 1, 1983, at which time, if the date has not been extended, and if we are permitted by the then current regulations, we will offer all of our subscribers the option to purchase their terminal equipment. However, we will continue to encourage them to lease their terminal equipment because we feel in this way they will continue to receive the most modern and efficient telephone service available at the least cost to them in the long run.—*Bertha B. Blair, Chairman and President, Denver and Ephrata Telephone and Telegraph Co., Ephrata, Pa.* □

B.B. Blair